

What is claimed is

1. Multi-component oxide glass composition for use as core of an optical waveguide, said composition comprising
  - a glass former component made of  $\text{SiO}_2$  having a concentration of between 30 and 90 mol% and
  - two Raman-active components of  $\text{Li}_2\text{O}$  and  $\text{Nb}_2\text{O}_5$  in a concentration of up to 50 mol% in total.
2. A composition according to claim 1, further comprising at least one glass modifier component of alkaline or earth-alkaline in a concentration of up to 40 mol%.
3. A composition according to claim 2, wherein said glass modifier component is any of the list  $\text{Li}_2\text{O}$ ,  $\text{Na}_2\text{O}$ ,  $\text{K}_2\text{O}$ ,  $\text{Rb}_2\text{O}$ ,  $\text{Cs}_2\text{O}$ ,  $\text{BeO}$ ,  $\text{MgO}$ ,  $\text{CaO}$ ,  $\text{SrO}$ ,  $\text{BaO}$ .
4. A composition according to claim 1, further comprising at least one other oxide component from the list  $\text{P}_2\text{O}_5$ ,  $\text{B}_2\text{O}_3$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{Ta}_2\text{O}_5$ ,  $\text{V}_2\text{O}_5$ ,  $\text{As}_2\text{O}_3$ ,  $\text{GeO}_2$ ,  $\text{TiO}_2$ ,  $\text{ZrO}_2$ ,  $\text{PbO}$ ,  $\text{Bi}_2\text{O}_3$ ,  $\text{Mo}_2\text{O}_3$ ,  $\text{WO}_3$ ,  $\text{SnO}_2$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{Ga}_2\text{O}_3$ ,  $\text{In}_2\text{O}_3$ ,  $\text{TeO}_2$  in a concentration of up to 40%.
5. A composition according to claim 1, further comprising at least one sulfide component in minor concentration.

6. An Raman-active optical fiber having a core with an higher refractive index and a cladding with a lower refractive index, said core comprising a multi-component oxide glass composition comprising

- a glass former component made of  $\text{SiO}_2$  having a concentration of between 30 and 90 mol% and
- two Raman-active components of  $\text{Li}_2\text{O}$  and  $\text{Nb}_2\text{O}_5$  in a concentration of up to 50 mol% in total.

7. A fiber according to claim 6, wherein said inner cladding is made of silicate glass.

8. A fiber according to claim 6, having areas comprising small  $\text{LiNbO}_3$  crystallization particles induced by heat treatment of the fiber.

9. An optical device comprising a Raman-active optical fiber, said fiber having a core with an higher refractive index and an cladding with a lower refractive index, said core comprising a multi-component oxide glass composition comprising

- a glass former component made of  $\text{SiO}_2$  having a concentration of between 30 and 90 mol% and
- two Raman-active components of  $\text{Li}_2\text{O}$  and  $\text{Nb}_2\text{O}_5$  in a concentration of up to 50 mol% in total.

10. An optical device according to claim 9 being a Raman amplifier or laser comprising a pump source coupled to said Raman-active fiber.